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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,699	08/20/2003	Yutaka Enko	16869S-091100US	9300

20350   7590   02/07/2007
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EXAMINER
MYINT, DENNIS Y

ART UNIT	PAPER NUMBER
2162	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 September 2006_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-5,9,11,12 and 14_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5,9,11,12 and 14_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _20 August 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date __.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Applicant's Amendment, filed on 11

September 2006.

2.   Claims 1-5, 9 and 12 have been amended. Claims 6-8, 10, and 13 have been

cancelled. Claim 14 has been added. Claims 1, 9, 11, and 12 are independent claims.

As such, claims 1-5, 9, 11-12, and 14 are pending. This office action is made final.

Response to Arguments

3.   Applicant's arguments filed on 11 September 2006 have been considered but are

not persuasive.

Referring to claims 1-5, Applicant argued on Page 7 of Applicant's arguments

that *Rabinovich does not teach or suggest a second computer program that is executed*

depending on access situation, wherein the second program includes a module for

searching the second network connected to the third computer and a module for

searching a candidate for migration for the second network.

In response it is pointed that Rabinovich does teach "*a second computer*

program that is executed depending on access situation" (Figure 1: *Host 103, Host*

104,Host 105, and Request Distributor 101, and Column 7 Lines 7-49; Note that, in the

method and system of Rabinovich, *Request Distributor* is the first computer), "*wherein*

the second program includes a module for searching the second network connected to

the third computer" (Column 7 Line 45 through Column 8 Line 31, i.e., *the request*

distributor decision as to which host to assign the request is made in accordance with

the method shown in FIG. 3) and "a module for searching a candidate for migration for

*the second network" (*Column 7 Line 45 through Column 8 Line 31, i.e., *the request*

distributor decision as to which host to assign the request is made in accordance with

the method shown in FIG. 3).

Specification

4.   The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required.

Claims 1 in Line 10 recites *"a first program and a second program"*, Claim 1 in

Line 12 recites *"the first program"*, Claim 1 Line 15 recites *"the second program"*, Claim

9 in Line 9 recites *"a first program and a second program"*, Claim 9 in Line 11 recites

"the first program", and Claim 9 in Line 14 recites *"the second program"*. The

specification merely discloses two processes as in *FIG. 4 is a flow chart showing a*

process *for updating the access table 122* (Specification, Paragraph 0066) and *FIG. 5*

is a flow chart showing an example of a process conducted by the server 105 for

selecting the migration candidate file (Specification, Paragraph 0076). Programs and

processes are different. A program could include from one to a plurality of routines (or a

routine and subroutines), hence one to many process. Said processes recited in

paragraphs 0066 and 0076 are, according to the specification, executed by the file

system program 120 alone (Specification, Paragraph 0063) – not by two separate

programs.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claim 1-5, 9, 11-12, and 14 are rejected under 35 U.S.C. 103(b) as being as

being anticipated by Rabinovich (hereinafter "Rabinovich") (U.S. Patent Number

6256675).

As per claim 1, Rabinovich teaches the limitations:

"A computer system comprising a first network, a first computer connected to the

first network, a second network connected to the first network, and a second computer

and a third computers connected to the second network"(Figure 1: *Host 103, Host*

104,Host 105, and Request Distributor 101, and Column 7 Lines 7-49), the first

computer (Request Distributor 101) comprising:

"a communication interface for connecting the first computer to the first network" (Figure 1: PORT 110 , and Column 6 Lines 31-33, i.e., *Request distributor 110 also includes a port 110 that is adapted to be coupled to a network 102*);

"a disk storage device for storing data" (Figure 1: *Request distributor 101*, and Column 6 Lines 17-29, i.e., *The request distributor is comprised of a processor 106, and a memory 107 that stores request distribution instructions*);

"a disk interface for communicating data with the disk storage device" (Figure 1: *Request Distributor 101*, Column 6 Lines 17-29 and Column 7 Lines 7-49*)*;

"a CPU for controlling the first computer" (Figure 1: *Request distributor 101*, and Column 6 Lines 7-16; and Figure 1: *Host 103*; and Column 6 Line 60 through Column 7 Line 7) ; and

"a memory" (Column 6 Lines 17-29, i.e., *The request distributor is comprised of a processor 106, and a memory 107 that stores request distribution instructions*) "for storing data and a first program" (Column 6 Lines 60-62, i.e., *a request distribution method;* and Figure 2) and "a second program for operating the CPU" (Column 7 Line 38 through Column 8 Line 31, i.e., *The request distributor selects a host that stores a replica of the requested object to respond to the request based upon the request metric and the distance metric;* and *the request distribution decision as to which host to assign the request is made in accordance with the method shown in Figure 3*),

wherein the program includes:

"a module for recording situations of access to a file stored in the disk storage

device from the third computer" (Column 6 Lines 64-67, i.e., *The request metric for a*

replica is a historical measure of the request for the object that have been forwarded to

the host);

"a module for designating the file as a candidate for migration to the second

computer depending on the access situations" (Column 14, Line 44 through Column 15

Line 34, i.e., *A host s periodically performs a method to decide on replica placement for*

its objects and *Deletion threshold u and replication threshold m*); and

"wherein the second program is executed depending on the access situation"

(Column 7 Lines 38-44, i.e., *The request distributor selects a host that stores a replica*

of the requested object to respond to the request based upon the request metric and the

distance metric), "the second program including:"

"a module for searching the second network connected to the third computer"

(Column 7 Line 45 through Column 8 Line 31, i.e., *the request distributor decision as to*

which host to assign the request is made in accordance with the method shown in FIG.

3);

"a module for searching candidate for migration for the second network" (Column

7 Line 45 through Column 8 Line 31, i.e., *the request distributor decision as to which*

host to assign the request is made in accordance with the method shown in FIG. 3);

"a module for designating the files as the candidate for migration to the second

computer" (Column 7 Lines 47-49, i.e., *A host p is identified that stores **a replica** of the*

requested object and that has the best distance metric m; Column 8 Lines 29-31, i.e.,

The request for the object is sent to the host with the smallest decision metric, step 403;

Note that by identifying host pas the candidate, the replica on host p is also identified as

the candidate for migration);

"a module for transmitting a migrator acceptor search packet to the second

computer for inquiring whether or not the second computer can accept the file" (Column

7 Line 64, i.e., *then the request is sent to host p;* and Column 8 Lines 32-49, i.e.,

Replica placement decisions and actions are made and taken substantially

autonomously by a host; Column 16 Lines 23 through Column 17 Line 22, i.e., *Host s*

sends a replication request to E's replicator r_E , which includes the ID of the object to be

replicated and the load on host s generated due to x_3. r_E forwards this request along the

path with the lowest-loaded hosts. and pseudo code from Line 28 to 54);

"a module for receiving a reply packet from the second computer as a response

to the migrator acceptor search packet" (Column 16 Lines 56-65, i.e., *sends*

acknowledgement back up the tree to r_E. and Column 16 Lines 30-35, i.e., *Send Refuse*

to invoker);

"a module for receiving a reply packet from the second computer as a response

to the migrator acceptor search packet" (Column 16 Lines 56-65, i.e., *sends*

acknowledgement back up the tree to r_E and Column 16 Lines 30-35, i.e., *send refuse*

to invoker); and

a module for transferring the file to the second computer (Column 16 Lines 55-60, i.e., *Host s*).

Claim 9 and 12 are rejected on the same basis as claim 1.

As per claim 2, Rabinovich is directed to the limitations:

"wherein: the memory stores a path of the file accessed by the third computer associating the with information on the access situations of the third computer" (Column 14, Lines 7-24, i.e., *total access count*) , and

"the program includes a module for designating the file corresponding to the access situation information as the candidate for migration when the information satisfies a predetermined condition" (Column 14, Lines 7-24, i.e., *So, an entity that frequently appears in preference paths may be a good candidate for placing an object replica*).

As per claim 3, Rabinovich teaches the limitation:

"wherein the program includes a module for transmitting an advertisement packet, indicating the file has been transferred to the second computer, to the second network" (Column 15 Line 17, i.e. **send** *OffLoadRequest(s) to the parent* **replicator** *of s;* and Column 13 Line 44 through Column 14 Line 7, i.e., *Replicators act as outside*

representatives of their regions to outside hosts and *Decisions on replica placement*

are done in cooperation between hosts and the replication service).

As per claim 4, Rabinovich teaches the limitation:

"wherein: the third computer comprises a memory for storing data and a

program" (Figure 1: *Host 103, Host 104,Host 105, and Request Distributor 101,* and

Column 7 Lines 7-49), and

"the program includes a module for receiving the advertisement packet and a

module for making access to the second computer for the file according to the

advertisement packet" (Column 6 Lines 7-29, i.e., *and distribute the request to a host*

(e.g. host 103) that stores a replica of the requested object). Note that request

distributor/replicators in an area are always in communication with other requestor

distributors/replicators and advertisement packets are inherent in the method

Rabinovich, which notifies placement of replicas in particular network areas (Column 13

Line 44 through Column 14 Line).

As per claim 5, Rabinovich teaches the limitation:

"wherein: the first network is further connected to a third network, and

the program includes a module for transmitting the migrator acceptor search packet to

the third network when no computer suitable for accepting the file is found in the second

network" (Figure 1: *Host 103, Host 104,Host 105, Request Distributor 101, Network*

102, and Requestor 109 and Column 16 Lines 23 through Column 17 Line 22). Note

that the method of Rabinovich has replicators in a hierarchy (Column 13 Line 44

through Column 14 Line 25). If there is no computer suitable for accepting the file,

acceptor search packets are inherently sent to other replicators in the higher levels of

the hierarchy until a suitable one is found. Since the replicators are connected to

Internet, there are more than one network, thus second, third, and more networks.

As per claim 11, Rabinovich in view of Rabinovich teaches the limitations:

"a program stored in a memory of a second computer which is connected to a

second network capable of communicating with a first network and which makes access

to a file of a first computer connected to the first network" (Figure 1: *Host 103, Host

104,Host 105, Request Distributor 101, Network 102, and Requestor 109*), comprising:

"a module for making access to the file via an interface of the second

computer to the second network using a path name after reception of the path name to

a third computer as a destination of the file transferred form the first computer" (Column

6 Lines 7-29, i.e., *and distribute the request to a host (e.g. host 103) that stores a

replica of the requested object*).

Note that request distributor/replicators in an area are always in communication

with other requestor distributors/replicators and advertisement packets are inherent in

the method Rabinovich, which notifies placement of replicas in particular network areas

(Column 13 Line 44 through Column 14 Line). Therefore, requestors will know exactly

where the transferred file is located via distributors/replicators.

As per claim 14, Rabinovich teaches the limitation:

"further comprising a module for transferring a directory belonging to the file to the second computer" (Column 16 Lines 55-60, i.e., *Host s*). Note that the system and methods of Rabinovich migrating a replica, which could be a file or files or a directory or directories.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint
Examiner
AU-2162

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